REMARKS

Applicants respectfully request reconsideration of the application, as amended, in view of the following remarks.

Claims 1-7 and 9-20 are active in this application. Claim 18 stands withdrawn from consideration as being drawn to non-elected subject matter.

The present invention as set forth in **Claim 1** relates to a water-soluble polymer composition obtained by continuous polymerization of at least one unsaturated monomer, wherein during said polymerization **at least one parameter biasing the polymerization is varied according to a recurrent pattern.**

Claims 2-7, 15-16 and 20 depend on Claim 1.

Claim 19 relates to a water-soluble **polymer composition**, obtained by continuous polymerization of at least one unsaturated monomer;

wherein during said polymerization at least one parameter biasing the polymerization is varied according to a recurrent pattern;

wherein said **recurrent pattern is an oscillation** about a mean value which can be selected at random;

wherein at least **one of the following parameters is subject to variation**:

- a concentration of at least one monomer,
- an amount of a catalyst,
- an amount of a molecular weight modifier,
- a pH value of a monomer solution, or
- a composition of said monomer solution.

Claim 9 relates to **a process** for the continuous production of a water-soluble polymer composition, said process comprising

polymerizing at least one unsaturated monomer, wherein at least one parameter biasing said polymerization is varied according to a recurrent pattern.

Claims 10-14 and 17 depend on Claim 9.

The term "recurrent pattern" is defined at page 4 of the specification, 2nd paragraph:

> In the meaning of the invention, "according to a recurrent pattern" means that the parameters biasing the polymerization are varied in any desired manner, but at regular recurring time intervals within a reasonable range familiar to those skilled in the art, and preferably in a continuous fashion.

EP 0 630 909 A1 or Patel et al (US 6,103,839) fail to disclose or suggest a water-soluble **polymer composition** obtained by continuous polymerization of at least one unsaturated monomer, wherein during said polymerization **at least one parameter** biasing the polymerization is **varied according to a recurrent pattern**. In particular, there is no disclosure of an oscillation as claimed in Claim 19.

In addition, EP 0 630 909 A1 or Patel et al (US 6,103,839) fail to disclose or suggest a **process** as claimed in Claim 9 in which at least one unsaturated monomer is polymerized, wherein at least one parameter biasing said polymerization is varied according to a recurrent pattern. In particular, there is no disclosure of an oscillation as claimed in Claim 10.

The Examiner argues that EP 0630 909 shows drop wise addition of monomer and that Patel et al disclose the continuous feeding of monomer. According to the Examiner, these process steps meet the claimed requirement of a parameter biasing according to regular reoccurring time integrals. However, Applicants disagree.

The continuous addition of monomer disclosed in Patel et al is **not a variation according to a recurrent pattern** of at least one parameter biasing the polymerization. In

other words, just because a polymerization is continuous it does not mean that a parameter is varied according to a recurrent pattern.

For the Examiner's convenience, Applicants attach herewith schematic figures illustrating examples of recurrent patterns according to the present invention. Applicants also attach a scheme showing in a simplified manner a continuous addition of monomer as described in Patel et al. Based on the above differences, the process claims of the present invention (Claims 9-14 and 17 cannot be anticipated by or obvious over Patel et al.

With regard to the product-by-process claims (Claims 1-7, 15, 16 and 19-20), Applicants wish to point out that the structure and properties of polymers depend on how the polymerization is performed. Different polymerization processes result in different polymers, having different structures and properties. Since the processes of Patel et al and the present invention are different, the claimed polymer composition is different from the polymers of Patel et al.

EP 0 630 909 A1 merely discloses feeding monomer in increments, but there is no **recurrent pattern** in which parameters biasing the polymerization are **varied at regular recurring time intervals**.

EP 0 630 909 A1 discloses at page 5, lines 41 to 42 that the reaction mixture is added during the polymerization incrementally or otherwise. Applicants disagree with the Examiner's allegation that "incrementally" means necessarily "dropwise." In addition, "incrementally" does not mean that the monomer is added according to a recurrent pattern as claimed. There is simply no disclosure in EP 0 630 909 A1 that drops are added according to a recurrent pattern as claimed. For the Examiner's convenience, Applicants have attached a scheme illustrating in a simplified manner incremental addition of monomer as disclosed in this reference. Based on the above differences, the process claims of the present invention (Claims 9-14 and 17 cannot be anticipated by or obvious over EP 0 630 909 A1.

Since the processes of EP 0 630 909 A1 and the present invention are different, the claimed polymer composition is different from the polymers of EP 0 630 909 A1.

Further, **Claim 10 relates to one embodiment of the present invention in which the pattern is an oscillation about a mean value which can be selected at random**. Also the water-soluble polymer composition of Claim 19 is obtained by continuous polymerization of at least one unsaturated monomer; wherein during said polymerization at least one parameter biasing the polymerization is varied according to a recurrent pattern; wherein said **recurrent pattern is an oscillation** about a mean value which can be selected at random.

EP 0 630 909 A1 or Patel et al (US 6,103,839) fail to disclose or suggest that a parameter **oscillates** about a mean value during the polymerization. In other words there are no recurring minima and maxima of a parameter such as those claimed in Claim 19:

- a concentration of at least one monomer,
- an amount of a catalyst,
- an amount of a molecular weight modifier,
- a pH value of a monomer solution, or
- a composition of said monomer solution.

Thus, Claims 10 and 19 should be allowable.

Therefore, the rejection of Claims 1-7, and 9-17 and 19-20 under 35 U.S.C. § 102(b) and 102(e) as anticipated by or, in the alternative, under 35 U.S.C. §103 (a) as obvious over EP 0 630 909 A1 or Patel et al (US 6,103,839) is believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of this rejection is respectfully requested.

In addition, the rejection of Claims 1-7 and 9-17 and 19-20 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over EP 0 296 331 B1 is respectfully traversed.

EP 0 296 331 B1 is discussed in the specification at the paragraph bridging pages 8 and 9:

> To carry out said process variant, **the continuous polymerization described in EP 0,296,331**, Example 4 and Fig. 2 **is modified** in such a way that the mass flow of catalyst solutions is varied by a regulator via metering valves 28 and 30 according to a preselected pattern at regular time intervals in a recurring fashion.

In other words, the process of EP 0 296 331 B1 was modified to include the claimed regular recurring time intervals. However, such modification is not disclosed or suggested in the reference.

Therefore, the rejection of Claims 1-7 and 9-17 and 19-20 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over EP 0 296 331 B1 is believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of this rejection is respectfully requested.

This application presents allowable subject matter, and the Examiner is kindly requested to pass it to issue. Should the Examiner have any questions regarding the claims or otherwise wish to discuss this case, he is kindly invited to contact Applicants' below-signed representative, who would be happy to provide any assistance deemed necessary in speeding this application to allowance.

Respectfully submitted,

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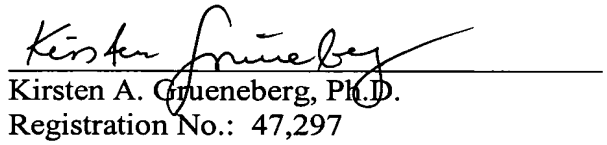

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